

U.S. EPA Science Advisory Board

Ecological Processes and Effects Committee

FY 2004 Member Biosketches

Ecological Processes and Effects Committee

Allen-King, Richelle

University at Buffalo

Dr. Richelle Allen-King is an Associate Professor at University at Buffalo (SUNY). She received her Ph.D. from the Department of Earth Sciences, University of Waterloo and B.A. from the Department of Chemistry at the University of California, San Diego. She was selected as the National Ground Water Association's Henry Darcy Distinguished Lecturer for 2003 and will present more than 50 lectures at national and international venues during this calendar year. She has served on committees for the National Research Council and presently serves as a member of their Water Science and Technology Board. She also serves as an Associate Editor for the journals Ground Water and Water Resources Research. Her research focuses on the geochemical processes that control the fate and transport of contaminants in ground and surface waters. Recent funding for her research has been received from the National Science Foundation, The Boeing Corporation, and the National Institutes for Water Research.

Dale, Virginia

Chair

Oak Ridge National Laboratory

Dr. Dale is a landscape ecologist at Oak Ridge National Laboratory and adjunct faculty member in the Department of Ecology and Evolutionary Biology at the University of Tennessee. She received her Ph.D. from the University of Washington in mathematical ecology in 1980. Dr. Virginia H. Dale's primary research interests are in environmental decision making, forest succession, land-use change, landscape ecology, and ecological modeling. She has worked on developing tools for land management; vegetation recovery following the eruption of Mount St. Helens; forest development subsequent to insect outbreaks, fires, wind throws, and clear-cutting; effects of air pollution and climate change on forests; tropical deforestation in Asia and Latin America; and integrating socioeconomic and ecological models of land-use change. Dr. Dale serves on the Science Advisory Board for the Grand Canyon Monitoring and Research Center, the Committee on Ecological Effects of Road Density of the National Academy of Sciences, and the US Scientific Committee for Problems of the Environment. Dr. Dale has served on the National Academy of Sciences Ecosystems Panel, the "Committee of Scientists" appointed by the Secretary of Agriculture, and the several panels that review proposals submitted to the National Science Foundation (NSF). She was Chair of the US Regional Association of the International Association for landscape and has been on the Governing Board of the Ecological Society of America. She is currently on the editorial board for the journals Ecological Economics and Ecological Indicators. She is also the Editor-in-Chief of Environmental Management. Dr. Dale has served on various committees of the SAB, including approximately 5 years as a member of EPEC, of which she is now Chair, and several years on the RSAC. Her current research is supported by the Department of Defense's Strategic Environmental Research and Development Program. (11/2003)

Fernandez, Ivan J.

University of Maine

Dr. Fernandez, is a professor and forest soils scientist at the University of Maine, Orono. He chairs the Department of Plant, Soil, and Environmental Sciences. His expertise is in nutrient and metal cycling in forested ecosystems, particularly in soil biogeochemical responses to ecosystem disturbance. He publishes regularly in professional journals on a multi-media range of subjects pertaining to forest ecology including soil biogeochemistry, fire ecology, nutrient cycling in soil and water, watershed processes and soil microbial ecology. He has also published numerous technical reports, book chapters, and a book. He is a member of numerous professional organizations such as the Society of American Foresters, Soil Science Society of America, National Association of Environmental Professionals and the Soil and Water Conservation Society to name a few. He serves as a member of the national Council of Soil Science Examiners, the Maine Board of Certification for Professional Geologists and Soil Scientists, and is responsible for oversight of the long-term whole ecosystem research program at the Bear Brook Watershed in Maine. His research interests are in atmospheric deposition and climate change effects on forested ecosystems and watershed processes, as well as the ecological impact of residuals utilization in forests. Current research projects include studies of long-term watershed acidification, base cation depletion, nitrogen saturation, municipal residuals utilization in forests, and the effects of fire and climate on mercury and nitrogen dynamics. His advanced degrees are in soil chemistry and forest resources from the University of Maine. Dr. Fernandez was recruited to the EPEC to participate in the strategic project on ecological assessment and reporting, and was reappointed to a second term, beginning 10/02.

Gilmour, Cynthia

The Academy of Natural Sciences

Dr. Cindy Gilmour, is Curator of the Academy of Natural Sciences, Estuarine Research Center in St. Leonard, MD. Academy of Natural Sciences in Maryland, Dr. Gilmour has expertise in Mercury biogeochemistry: mechanisms and control of microbial mercury methylation from the cellular to ecosystem level; Sulfate-reducing bacteria and sulfur biogeochemistry in aquatic sediments; Estuarine and lacustrine microbial ecology; and response to stressors. Dr. Gilmour is extensively published, active in numerous professional associations including the American Association for the Advancement of Science, American Chemical Society (Geochemistry and Environmental Chemistry Divisions), American Society for Microbiology (Microbial Ecology), and American Society of Limnology and Oceanography. In addition to the SAB, Dr. Gilmour has been an active participant in numerous advisory capacities including NSF Environmental Geochemistry and Biogeochemistry Review Panel, the States of Florida and Maryland, and the USGS. She received her Ph.D. from the University of Maryland in Marine, Estuarine and Environmental Sciences. Her second term on EPEC, ends 9/03.

Hawkins, Charles

Utah State University

Charles Patrick Hawkins is a Professor in the Department of Aquatic Watershed, and Earth Resource, in the College of Natural Resources at Utah State University. Dr. Hawkins research interests include conservation, management, and restoration of stream and riparian ecosystems; sampling designs and statistical methods applicable to ecological research and biomonitoring; predictive modeling of community composition; the use of aquatic invertebrates to assess and monitor stream, lake, and wetland ecological integrity; and the cumulative effects of watershed alteration on the physical, chemical, and biotic condition of aquatic and riparian ecosystems. He has published extensively on topics in the development and evaluation of predictive models and bio-indicators for measuring the biological integrity of streams. Dr. Hawkins is active with the Ecological Society of America, and past chair of the ESA Aquatic Ecology Section. He has received many grants from the EPA and US Forest Service to study the behavior and performance of different methods of biological assessment for streams. Recent contributions to expert panels include as an invited participant by USEPA for Establishing Reference Conditions for Streams and Rivers in the Western United States in 2001; the Pellston Workshop on Ecological Assessment of Aquatic Resources: Application, Implementation, and Communication in 2000; and as an Invited participant to the US EPA sponsored workshop on Predicting the Effects of Climate Change on Aquatic Ecosystems of the Great Basin and Rocky Mountains in 2000. Dr. Hawkins earned his Ph.D. in Entomology from Oregon State University in 1982.

Master, Lawrence L.

NatureServe

Lawrence Master is Chief Zoologist for NatureServe, a non-governmental organization dedicated to providing the scientific information needed to conserve biological diversity. Previous to that he was the Chief Zoologist for The Nature Conservancy from 1988 to 2000, and from 1982 to 1996 was also Coordinator/ Zoologist for the Conservancy's Eastern Heritage Task Force. His current research interests include species status assessment and conservation site selection methodologies, and predictive range modeling. Dr. Master recently served on The Heinz Center committee for freshwater indicators. Dr. Master received his Ph.D. in Zoology from the University of Michigan. He has been reappointed to a second term on EPEC, ending 9/04.

Meyer, Judy L.

University of Georgia

Dr. Judith L. Meyer is a Distinguished Research Professor in the Institute of Ecology at the University of Georgia. She holds a B.S. in Zoology from the University of Michigan, a M.S. in Zoology from the University of Hawaii, and a Ph.D. in Ecology from Cornell University. She has been on the faculty at UGA since 1977. She is an aquatic ecologist who has published over 150 scientific papers on her research on rivers and streams. Her research has focused on ecological processes that maintain water quality, on river and stream food webs, and on the impact of watershed disturbance, urban development, and riparian zone management on river and stream ecosystems. Her current research is on urban rivers, impacts of lawn care practices on stream ecosystems, nitrogen cycling in rivers, impacts of excessive sedimentation on aquatic biota, importance of decaying leaves and woody debris in stream ecosystems, and effects of changes in riparian buffer designations for Georgia's trout streams. She served as Principal Investigator for the Coweeta Long-term Ecological Research Site. Recent funding sources are National Science Foundation, Environmental Protection Agency Water and Watersheds Program, U.S. Fish and Wildlife Service, Mott Foundation, The Nature Conservancy, and Georgia Department of Natural Resources. She has served as President of the Ecological Society of America and has been appointed to numerous committees of the National Academy of Sciences/National Research Council including the Water Science and Technology Board. She is a member of the Ecological Processes and Effects Committee of the EPA Science Advisory Board. She serves as Chair of the Science and Technical Advisory Committee of American Rivers, a national river conservation organization. She served on the Freshwater Working Group that helped prepare the Heinz Center Report "The State of the Nation's Ecosystems." She was recently named a Clean Water Act Hero by the Clean Water Network for her scientific research that has contributed to achieving the goals of the Clean Water Act. She is the recipient of the 2003 Award of Excellence in Benthic Science from the North American Benthological Society. Judith L. Meyer holds the tenured position of Distinguished Research Professor of Ecology at the University of Georgia, Athens GA. Her principle research interests are energy and materials flux in aquatic ecosystems, particularly streams; nutrient dynamics in streams; dissolved organic carbon in streams; impacts of riparian management practices on streams; urban streams; impacts of excess sediments in streams; and incorporation of metals into riverine food webs. Dr. Meyer has held numerous leadership positions in her profession. She was President of the Ecological Society of America from 1994-1995, and Vice President from 1991-1992. She has been Director for Science of the River Basin Science and Policy Center at the University of Georgia since 1999; is a Fellow of the American Association for the Advancement of Science. She was the U.S. National Representative to the International Association for Theoretical and Applied Limnology from 1992-2001; served on the Governing Boards of the Council of Scientific Society Presidents from 1994-95; and Water Science and Technology Board, National Academy of Sciences from 1990-1993. Dr. Meyer is the author of over 150 publications on rivers and streams in the peer-reviewed literature. She received her Ph.D. in Ecology from Cornell University 1978.

Mitsch, William

The Ohio State University

William Mitsch is a Professor in the School of Natural Resources at Ohio State University, and Director of the Olentangy River Wetland Research Park. Dr. Mitsch's research interests include wetland ecology and biogeochemistry, the creation and restoration of wetlands, ecosystem modelling and wetland management policy. He is extensively published in the peer reviewed literature and is Editor-in-Chief of the journal Ecological Engineering. Dr. Mitsch received his Ph.D. in Environmental Engineering Sciences (Systems Ecology) from the University of Florida in 1975. He has been reappointed to his second term on the EPEC ending 9/04.

Mueller, Tom

University of Tennessee

Thomas C. Mueller is a Professor in the Department of Plant Sciences, which is housed in the Institute of Agriculture within the University of Tennessee. He is located on the main campus in Knoxville, which is the flagship campus for the land grant University for the state of Tennessee. Dr. Mueller was reared on a small diversified grain farm in southern Illinois. He received his BS from the University of Illinois in Agronomy, his MS from the University of Kentucky in Crop Science, and his PhD from the University of Georgia in Crop Science. His graduate studies focused on weed science, specifically how herbicides behave in plants and the environment. His primary research area is the environmental fate of pesticides (especially herbicides) in soils, water systems, and in the air (via drift). His main commodity focus is corn and soybeans, although he has conducted research in cotton, rice, wheat, pastures, turf, native areas (national parks), and others. This diversity in research areas and teaching several undergraduate and graduate courses has imparted a broad perspective, one that realizes that integrated pest management must consider environmental and ecological ramifications of crop production systems. Dr. Mueller has previously served on an EPA Scientific Advisory Panel, is currently on the Publications Oversight committee for his national organization (Weed Science Society of America), has served as an associate editor for the technical journals in his discipline (Weed Science, Weed Technology), is currently on the executive board in his regional technical society (Southern Weed Science Society), and is active in various state, regional, and national programs. He is a frequent reviewer for the Journal of Agriculture and Food Chemistry, and for the Journal of the Association of Official Analytical Chemists. His sources of funding include Hatch funding through the Tennessee Agricultural Experiment Station, Regional project funds, indirect support from corporate sponsors, and support from commodity associations (Tennessee Soybean Promotion Board, Tennessee Turf Association).

Newman, Michael C.

College of William & Mary

Dr. Newman received degrees in zoology from the University of Connecticut (B.A., M.S.) and environmental sciences from Rutgers University (M.S., Ph.D.). After his postdoctoral studies, he was a research ecologist at the University of Georgia's Savannah River Ecology laboratory. He now holds a Professor of Marine Science position at the College of William and Mary's School of Marine Science after ending a three-year term as Dean of Graduate Studies of the School of Marine Science. His research emphasizes quantitative methods in ecotoxicology with topics of interest ranging from chemical measurement statistics to QSAR-like models for predicting metal ion effects to contaminant effects on population genetics to methods of predicting community level effects. He has authored approximately 100 publications on these topics including four books, Quantitative Methods in Aquatic Ecotoxicology, Fundamentals of Ecotoxicology, Population Ecotoxicology and Community Ecotoxicology. He also edited several books, Metal Ecotoxicology, Hierarchical Ecotoxicology, Risk Assessment: Logic and Measurement, Coastal and Estuarine Risk Assessment, and Risk Assessment with Time-to-Event Models. Dr. Newman is active in advisory service. He served on OECD, EPA, DOE, NAS, and state environmental regulatory and risk assessment committees and panels. He was one of two U.S. members of an OECD team charged with assessing statistical methods for analyzing toxicity data. Work with DOE involved complex-wide consideration of data quality objectives for risk assessment activities, and various site-specific advisory services to the Savannah River and Hanford sites. He has been a member of numerous EPA teams including the FIFRA ECOFRAM working group, two FIFRA science advisory panels, the Chesapeake Bay Office science advisory board, a FQPA scientific review board, and a joint U.S. EPA-Israeli Water Agency working group. He has reviewed numerous risk assessment documents for EPA and was a consultant to the NAS (Everglades Ecosystem Assessment). He continues to work actively with various Virginia Department of Environmental Quality teams and panels.

Pittinger, Charles A.

The Cadmus Group Inc.

Charles Pittinger is an environmental toxicologist and policy analyst with the Cadmus Group. Fall 2002 he established Cadmus' Cincinnati offices, focusing on product stewardship and the integration of hazard and risk tools for effective risk management. Previously, Dr. Pittinger worked as Director of Research for SoBran, Inc., where his duties included supervising research contracts at three EPA research facilities. For 17 years, Dr. Pittinger worked for The Procter & Gamble Company, principally in environmental risk assessment and management. He has published over 40 scientific articles, book chapters and editorials on subjects including: regulatory and science policy; peer review; ecological risk assessment and management of consumer product chemicals; risk communications; life cycle analysis; sustainability; ecological assessment; environmental mutagenesis; environmental chemistry; aquatic toxicology; and sediment contamination. Dr. Pittinger has served in numerous leadership roles in both the public and private sectors. He was elected to the Society for Environmental Toxicology and Chemistry Board of Directors, served as SETAC's first Congressional Science Fellow with the U.S. House of Representatives Science Committee in 1993-94, and was awarded SETAC's Exceptional Service Award in November 2000. He initiated SETAC's Peer Review Subcommittee and Technical Issue Paper on "Sound Science". He chaired the American Industrial Health Council's Ecological Risk Assessment Committee for 5 years. He has served on the OECD's Risk Assessment Advisory Board, the American Chemistry Council's Ecological Risk and Life-Cycle Analysis Committees; and ASTM Subcommittee E-47. He received his Ph.D. in Zoology from Virginia Polytechnic. Dr. Pittinger was reappointed to a second term on EPEC ending 9/04.

Rabeni, Charles

U.S. Geological Survey

Charles Rabeni holds a Ph.D. in zoology from the University of Maine. He is Leader of the Missouri Cooperative Fish and Wildlife Research Unit, and Professor in the Department of Fisheries and Wildlife, University of Missouri. His research addresses questions useful to the conservation or restoration of the biological integrity of streams to enhance their recreational and ecological benefits. His focus is on invertebrates and fishes as endpoints and integrators of ecological conditions. His interest is in delineating those key environmental factors influencing the biota - such as siltation, dissolved oxygen, and extreme temperatures - and to design cost effective mitigation strategies. One current effort is a series of projects aimed at producing biologically-sound sediment criteria for Missouri streams. Dr. Rabeni has published over 90 peer-reviewed journal articles, book chapters, and book editorships. He has served in numerous capacities with the North American Benthological Society, including as President in 1992. For the American Fisheries Society, he served in numerous capacities including President of the Missouri Chapter and for two years as Associate Editor for the Transactions of the American Fisheries Society. Dr. Rabeni has served on numerous panels and board, including: assisting the National Park Service by serving on expert panels and task forces to develop long-term monitoring protocols for their Prairie Cluster Park network, and their Heartland Park network; serving on an expert panel for the USGS's Grand Canyon Monitoring and Research Center to evaluate the existing biological research and monitoring program for the Colorado River; assisting the national office of the Nature Conservancy in their project for the conservation of aquatic species and ecosystems in the Central Tallgrass Prairie Region; as a member of an interagency team advising the Mark Twain National Forest (USFS) on research necessary to evaluate cumulative effects of timber harvest on aquatic fauna; serving on a joint agency (MDC, MDNR, NRCS) work group evaluating the ecological consequences of proposed NRCS PL-566 projects; serving as the scientific advisor on the Missouri Aquaculture Task Force to review relations between private aquaculture industry and the Missouri Department of Conservation; serving on the Liaison Committee of the WRD/USGS National Water Quality Assessment Program-Ozark Region.

Sanders, James

Skidaway Institute of Oceanography

James Sanders is Director of the Skidaway Institute of Oceanography, a campus of the University System of Georgia. He received his B.S. from Duke University in Zoology and his Ph.D. from the University of North Carolina in 1978 in Marine Sciences, then was a postdoctoral investigator at Woods Hole Oceanographic Institution. Prior to his arrival in Savannah Dr. Sanders was on the faculty and served as Director of the Academy of Natural Sciences' Estuarine Research Center in Maryland from 1981 to 1999, then was Chairman of the Department of Ocean, Earth and Atmospheric Sciences at Old Dominion University in Virginia. Dr. Sanders is known for his interests within the area of trace element biogeochemistry: how trace elements are transported through coastal zones, transformed by chemical and biological reactions during transport, and how they can impact aquatic ecosystems. He serves as a consultant to federal and state science agencies and industrial groups in the U.S. and Europe. He is a member of numerous scientific societies, is President of the Southern Association of Marine Laboratories and serves on the Editorial Board of the Society of Environmental Toxicology and Chemistry, the Board of Governors of the Consortium for Oceanographic Research and Education, and is the Georgia representative to the Citizens' Advisory Board for the Savannah River Site. He is the author of over 70 scientific publications. His research funding has come from a variety of federal and state agencies (NOAA, EPA, NSF, MD DNR) and private organizations (EPRI, other corporations).

Thompson, Timothy

The RETEC Group

Mr. Thompson holds an M.S. in Ocean Sciences from the University of British Columbia, and was a Monbusho Fellow, at the University of Nagasaki and Tokyo Fisheries University, Japan. He has 18 years of experience in characterization and management of sediments. National experience in sediments comes from his leadership roles as the project manager for the Remedial Investigation and Feasibility Study for the Lower Fox River/Green Bay PCB CERCLA Site in Wisconsin, as the project manager for a for a large sediment RCRA Facilities Investigation and Corrective Measures Study at a playa lake and on the North Platte River, and as a peer reviewer on the Hudson River PCB Superfund site. Past experience includes developing sediment and water quality monitoring programs for assessing sediment alternatives for a creosote-contaminated site in Washington, developing a long-term monitoring plan for the Fox River, development and application of sediment transport models to environmental decision making. His experience in sediments also includes habitat evaluations and integration of field data with spatial modeling tools, spatial characterization and statistical analysis of bedded sediment data, bedded sediment characterization, water quality monitoring, and ecological risk assessment.